WHAT IS CLAIMED IS:

1. In accordance with this invention, a tire is provided having a tread of a rubber composition which is prepared by a process comprised of blending, based on 100 parts by weight (phr) of rubber:

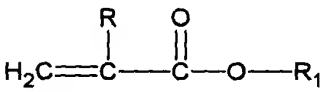
(A) 100 phr of elastomers comprised of

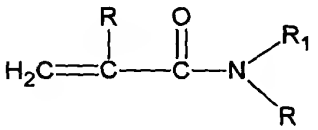
(1) about 10 to about 100 phr of aqueous emulsion polymerization prepared terpolymer rubber comprised of repeat units derived from:

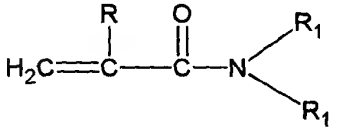
(a) about 49.5 to about 84.5 weight percent of a conjugated diene monomer which contains from 4 to 8 carbon atoms,

(b) about 15 to about 50 weight percent of a vinyl aromatic monomer selected from at least one of styrene and alphamethyl styrene and

(c) about 0.5 to about 5 weight percent of at least one co-monomer selected from hydroxyalkyl acrylates and hydroxyalkyl acrylamides, as the case may be, of the following general formulas (I), (II), and (III):

(I) 

(II) 

(III) 

wherein R represents a hydrogen atom or an alkyl group containing from 1 through about 8 carbon atoms, preferably a hydrogen atom or an alkyl group containing from 1 through about 4 carbon atoms, preferably a hydrogen atom or a methyl group and more preferably a methyl group;

wherein R_1 represents a saturated alcohol group containing from about 1 through about 8 carbon atoms, preferably from 1 through 4 carbon atoms and preferably selected from at least one of hydroxyethyl and hydroxypropyl groups and preferably a hydroxypropyl group, wherein said saturated alcohol group is selected from primary, secondary and tertiary alcohol groups,

(2) from zero to about 90 phr of at least one additional conjugated diene-based elastomer, selected from homopolymers and copolymers of at least one of isoprene and 1,3 butadiene and copolymers of at least one of isoprene and 1,3-butadiene with a vinyl aromatic compound selected from styrene and alphamethyl styrene, preferably styrene,

(B) about 40 to about 120 phr reinforcing filler selected from at least one of carbon black and particulate silica-containing material selected from at least one of synthetic amorphous silica and silica treated carbon black with domains of silica on its surface, preferably synthetic silica;

wherein said filler is comprised of

(1) about 35 to about 90 phr of carbon black and about 5 to about 30 phr of said silica-containing material, or

(2) about 5 to about 30 phr of carbon black and about 35 to about 90 phr of said silica-containing material, and

(C) about 0.5 to about 10 phr of at least one silica coupling agent having a moiety reactive with hydroxyl (e,g, silanol groups) on the surface of the said silica and on the surface of said silica domains on the surface of said silica treated carbon black, and an additional moiety interactive with the said elastomer(s);

wherein said rubber composition is prepared by a process which comprises:

(1) blending, in at least one sequential mixing step in an internal mixer and in the absence of free sulfur, said terpolymer rubber, and additional diene-based elastomer(s) if used, together with said reinforcing filler(s), to a temperature in a range of about 140°C to about 175°C;

(2) subsequently blending therewith in the same or subsequent sequential mixing step in an internal rubber mixer and in the absence of free sulfur, said coupling agent and the remaining amount of said silica-containing material , to a temperature in a range of about 140°C to about 175°C ,

(3) subsequently blending free sulfur therewith in an internal rubber to a temperature in a range of about 100°C to about 125°C

2. The tire of claim 1 wherein said co-monomer of Formula (I).

3. The tire of claim 1 wherein said rubber composition is prepared a process comprised of by a process comprised of blending, based on 100 parts by weight (phr) of rubber:

(A) 100 phr of elastomers comprised of

(1) about 25 to about 75 phr of aqueous emulsion polymerization prepared terpolymer rubber comprised of repeat units derived from:

(a) about 49.5 to about 84.5 weight percent of 1,3-butadiene,

(b) about 15 to about 50 weight percent of styrene, and

(c) about 0.5 to about 5 weight percent of a co-monomer selected from hydroxymethyl methacrylate, 2-hydroxyethyl methacrylate, 2-hydroxypropyl methacrylate (HPMA isomer), 3-hydroxypropyl methacrylate (HPMA isomer), 3-phenoxy-2-hydroxypropyl methacrylate, hydroxybutyl methacrylate, hydroxyhexyl methacrylate and hydroxyoctyl methacrylate,

(2) from 25 to about 75 phr of at least one additional conjugated diene-based elastomer, selected from homopolymers and copolymers of at least one of isoprene and 1,3 butadiene and copolymers of at least one of isoprene and 1,3-butadiene with styrene,

(B) about 40 to about 120 phr reinforcing filler selected from at least one of carbon black and particulate silica-containing material selected from at least one of synthetic amorphous silica and silica treated carbon black with domains of silica on its surface, preferably synthetic silica;

wherein said filler is comprised of

(1) about 35 to about 90 phr of carbon black and about 5 to about 30 phr of said silica-containing material, or

(2) about 5 to about 30 phr of carbon black and about 35 to about 90 phr of said silica-containing material, and

(C) about 1 to about 7 phr of at least one silica coupling agent having a moiety reactive with hydroxyl (e,g, silanol groups) on the surface of the said silica and on the surface of said silica domains on the surface of said silica treated carbon black, and an additional moiety interactive with the said elastomer(s);

wherein said rubber composition is prepared by a process which comprises:

(1) blending, in at least one sequential mixing step in an internal mixer and in the absence of free sulfur, said terpolymer rubber, and additional diene-based elastomer(s) if used, together with said reinforcing filler(s), to a temperature in a range of about 140°C to about 175°C;

(2) subsequently blending therewith in the same or subsequent sequential mixing step in an internal rubber mixer and in the absence of free sulfur, said coupling agent and the remaining amount of said silica-containing material , to a temperature in a range of about 140°C to about 175°C ,

(3) subsequently blending free sulfur therewith in an internal rubber to a temperature in a range of about 100°C to about 125°C

4. The tire of claim 1 whereon said co-monomers are of structural formula (I) selected from at least one of 2-hydroxyethyl methacrylate, 2-hydroxypropyl methacrylate, 3-hydroxypropyl methacrylate, hydroxybutyl methacrylate, 3-phenoxy-2-hydroxypropyl methacrylate, hydroxyhexyl methacrylate and hydroxyoctyl methacrylate .

5. The tire of claim 1 wherein co-monomers are selected from at least one of 2-hydroxypropyl methacrylate and 3-hydroxy-propyl methacrylate.

6. The tire of claim 1 wherein said co-monomers are a blend of 2-hydroxypropyl methacrylate and 3-hydroxy-propyl methacrylate in weight ratio in range of from about 85/15 to about 60/40, respectively.

7. The tire of claim 3 wherein said co-monomers are selected from at least one of 2-hydroxypropyl methacrylate and 3-hydroxy-propyl methacrylate.

8. The tire of claim 3 wherein said co-monomers is a blend of 2-hydroxypropyl methacrylate and 3-hydroxy-propyl methacrylate and in weight ratio in a range of from about 85/15 to about 60/40.

9. The tire of claim 1 wherein said co-monomers are of structural formula (II) and/or (III) selected from at least one of hydroxymethyl methacrylamide, 2-hydroxyethyl methacrylamide, 2-hydroxypropyl methacrylamide and 3-hydroxypropyl methacrylamide.

10. The tire of claim 1 wherein said carbon black is present in an amount of about 35 to about 90 phr and said amorphous silica is present in amount of about 5 to about 30 phr whereby, insofar as the said carbon black and silica are concerned, the carbon black is in the majority.

11. The tire of claim 1 wherein said carbon black is present in an amount of about 5 to about 30 phr and said amorphous silica is present in amount of about 35 to about 90 phr whereby, insofar as said carbon black and silica are concerned, the silica is in the majority.

12. The tire of claim 3 wherein said carbon black is present in an amount of about 35 to about 90 phr and said amorphous silica is present in amount of about 5 to about 30 phr whereby, insofar as the said carbon black and silica are concerned, the carbon black is in the majority.

13. The tire of claim 3 wherein said carbon black is present in an amount of about 5 to about 30 phr and said amorphous silica is present in amount of about 35 to about 90 phr whereby, insofar as said carbon black and silica are concerned, the silica is in the majority.

14. The tire of claim 1 wherein said amorphous silica is selected from at least one of precipitated silica and precipitated aluminosilicate.

15. The tire of claim 3 wherein said amorphous silica is selected from at least one of precipitated silica and precipitated aluminosilicate.

16. The tire of claim 1 wherein said amorphous silica is selected from at least one of precipitated silica and precipitated aluminosilicate having a BET surface area in a range of about 80 to about 300 m^2/g and a DBP value in a range of about 100 to about 350 $cm^3/100g$.

17. The tire of claim 1 wherein said coupling agent is a bis(3-trialkoxysilylalkyl) polysulfide having an average of from 2.2 to 2.6 or from 3.5 to 4 connecting sulfur atoms in its polysulfidic bridge.

18. The tire of claim 17 wherein said coupling agent is a bis(3-triethoxysilylpropyl) polysulfide.

19. The tire of claim 1 wherein said coupling agent is a bis(3-triethoxysilylpropyl) polysulfide having an average of from 2.2 to 2.6 or from 3.5 to 4 connecting sulfur atoms in its polysulfidic bridge.

20. The tire of claim 1 wherein said terpolymer rubber has a Tg in a range of about -65°C to about 0°C, and a non oil extended unvulcanized polymer Mooney (ML/4/100C) in a range from 50 to 120.